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Facilitating mathematisation in modelling by beginning modellers in secondary school.

Stillman, Gloria Ann (ed.) et al., Mathematical modelling in education research and practice. Cultural, social and cognitive influences. Cham: Springer (ISBN 978-3-319-18271-1/hbk; 978-3-319-18272-8/ebook). International Perspectives on the Teaching and Learning of Mathematical Modelling, 93-104 (2015).

Summary: Based on theoretical considerations, a possible means of gaining a resolution of the long standing issues of problem formulation and specification and their successful mathematisation by relatively naïve modellers is proposed. This is based on empirical evidence having been provided for paradigmatic cases of the construct of implemented anticipation as proposed by Niss, that is, foreshadowing of future action projected back onto decisions about current action during ideal mathematisation. A Foreshadowing and Feedback Framework to Engage Beginning Modellers in Implemented Anticipation and its theoretical underpinnings are outlined and illustrated using empirical data.

Classification: M13 D33

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